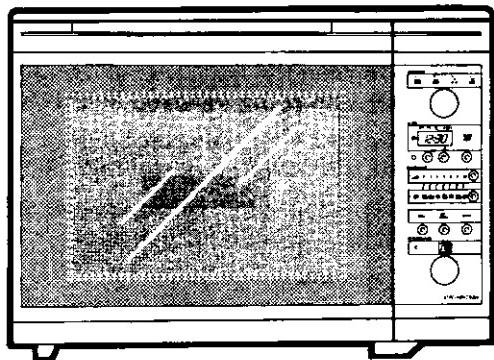


SERVICE



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# Service Manual

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AV = AVANA BROWN

WH = WHITE

MW A1 - INTRODUCTION, SAFETY

MW B1 - TECHNICAL DATA

MW C1 - INSTRUCTIONS FOR INSTALLATION

MW D1 - WORKING PRINCIPLE, PART NOMENCLATURE

MW E1 - OPERATING INSTRUCTIONS

MW F1 - DESCRIPTION AND FUNCTIONS OF COMPONENTS

MW G1 - INSTRUCTIONS FOR DISMANTLING AND REPLACEMENT

MW H1 - MEASUREMENTS AND ADJUSTMENTS

MW I1 - RF LEAKAGE

MW L1 - COMPONENTS CHECK

MW N1 - WIRING DIAGRAMS - FUNCTIONAL DESCRIPTION

MW O1 - EXPLODED VIEW, PARTS LIST

## INTRODUCTION

Before leaving the factory each oven is carefully checked.  
It must however, be installed and used correctly.

Despite all the steps taken to make the oven safe, the safety is dependent on the correct installation and the fact the user understands how to use and maintain the oven.

The information in this section should be used as a reminder that the oven is safe and that anyone who uses it must first read the instructions for use in order to be able to use the oven correctly and obtain the best results.

## SAFETY

To avoid injury to yourself and damage to the appliance always work to the following rules when servicing an oven.

- Always disconnect the plug from the mains before starting work.  
If there is no plug switch-off the electricity supply at the control box.
- When you have finished servicing an oven before you reconnect it to the mains, make sure that:
  - all the internal connections are correct
  - the wires are insulated and not touching the door or the cabinet or anything sharp
  - all the earth connections are electrically and mechanically sound
  - do not modify or anyway interfere with the safety devices built-in to the oven
  - make sure that each replacement part you use conforms to the manufacturer's specifications
- Do not start a repair if you have any doubt as to your ability to complete it.

**TECHNICAL DATA**

- **Dimensions**

|         |   |
|---------|---|
| Cabinet | height : 395 mm<br>width : 550 mm<br>depth : 570 mm |
| Cavity  | height : 240 mm<br>width : 345 mm<br>depth : 370 mm |
- **Weight**

|             |         |
|-------------|---------|
| Netweight   | : 33 kg |
| Grossweight | : 36 kg |
- **Versions**

|                                |   |
|--------------------------------|---|
| Supply voltage                 | : 220 V and 240 V $\pm 10\%$ - 50 Hz  |
| Current consumption full power | : approx. 13 A (UK version)<br>14 A (Continental version)<br>13 A (Swedish version) |
| Current consumption Stand-by   | : 0.5 A   |
- **Mains fuse (in the oven)** : T 6.3 A (delayed) (Microwave part)
- **Power line fuse** : 16 AT (Continental version)  
13 A (UK version)  
10 A (Swedish version)
- **Power consumption** : MW = 1300 W  
Grill = 1900 W  
F.A. = 1700 W
- **Magnetron**

|                     |   |
|---------------------|---|
| Operating frequency | : 2 M 240   |
| Output power        | : 2450 $\pm$ 25 MHz<br>700 W<br>600 W (Swedish version) |
- **Power levels** : 20-100%
- **Thermostat** : 50-250°C
- **Timer** : Electronic
- **Heater voltage** : 3.3 V  $\pm$  10%
- **Anode voltage** : approx. 4 kV d.c.
- **Cos  $\varphi$**  : approx. 0.95
- **Cooling** : forced air, max inlet temperature 35°C
- **Inrush current** : approx. 35 A
- **Current leakage to earth** : approx. 0.6 mA
- **Rectifier current** : not possible to measure
- **Commercial type number** : M930
- **Electrical connection**

|       |   |
|-------|---|
| 220 V | : Cord and plug EU, 16 A with 2 kinds of earth connection |
| 240 V | : Cord and fused plug UK                                  |

**INSTRUCTIONS FOR INSTALLATION**

Place the microwave oven on a stable, level surface.

Do not place the appliance close to heat sources.

To allow good air circulation be sure that the air inlet on top part of left-hand side is not blocked.

The air outlet on the top of the oven and the top part of right-hand side shall have at least 5 cm air space to the surroundings.

Take care to follow the same advice if the oven is to be hung on the wall by the wall hanging kit.

**INSTALLATION**

The oven is set for the voltage indicated on the type plate situated on the back side of the oven.

Check that the oven is connected to the correct voltage and properly earthed.

Use a correct fuse. See chapter "Technical data".

Measure the output power in accordance with the 1 litre of water method.

The measurement is explained in chapter "Measurements and adjustments".

Demonstrate the oven to the customer. Advise the customer of the servicing arrangements.

**CAUTION - MICROWAVE RADIATION**

**PERSONNEL SHOULD NOT BE EXPOSED TO THE MICROWAVE ENERGY WHICH MAY RADIATE FROM THE MAGNETRON, WAVEGUIDE OR ANTENNA IF THEY ARE IMPROPERLY USED OR CONNECTED. ALL INPUT AND OUTPUT MICROWAVE CONNECTIONS, WAVEGUIDES, FLANGES AND GASKETS MUST BE SECURE.**

**NEVER OPERATE THE DEVICE WITHOUT A MICROWAVE ENERGY ABSORBING LOAD ATTACHED.**

**NEVER LOOK INTO AN OPEN WAVEGUIDE OR ANTENNA WHILE THE DEVICE IS ENERGIZED.**

**NEVER OPERATE AN OVEN WITH CABINET OFF WITHOUT MEASURING THE MICROWAVE LEAKAGE AROUND MAGNETRON AND VISIBLE MICROWAVE CONNECTIONS (WELDING JOINTS).**

Do not operate the oven if the following conditions exist:

- The door does not close firmly against the door support because of the door being warped or the hinges damaged.
- The door trims or seals are damaged.
- If there is any visible damage to the oven.
- If the door does not close properly.

Avoid operating the oven if known components in the interlock system, oven door or microwave generating assembly are known defective. They must be replaced.

**WARNING - HIGH VOLTAGE**

**IT IS POSSIBLE TO COME IN CONTACT WITH LETHAL HIGH VOLTAGE WHEN WORKING WITH HV TRANSFORMER, HV CAPACITOR, AND MAGNETRON.**

**THEREFORE NEVER TRY TO MEASURE THE HIGH VOLTAGE. ALWAYS TAKE UTMOST CARE WHEN PERFORMING ELECTRIC MEASUREMENTS INSIDE THE OVEN.**

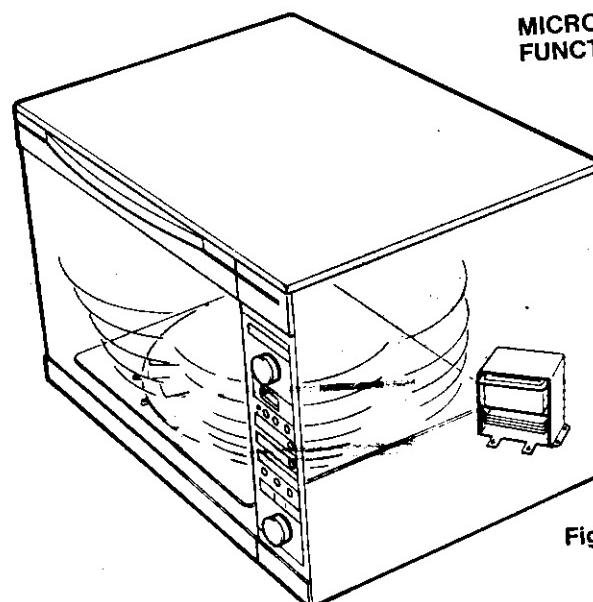


Fig. 1/A

Microwave energy generated by the magnetron is transmitted to the rotating antenna which reflects and distributes the energy into the oven cavity for even cooking results.

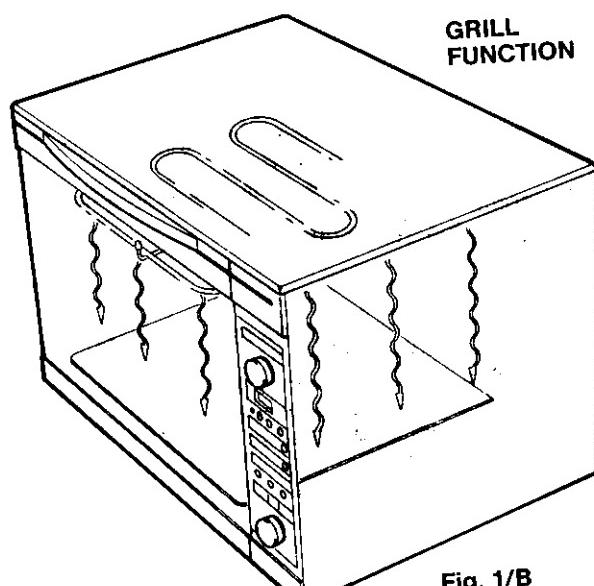


Fig. 1/B

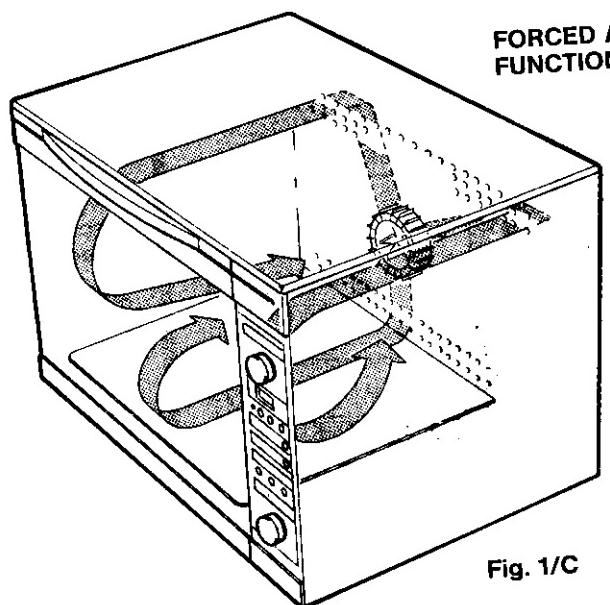


Fig. 1/C

#### PART NOMENCLATURE

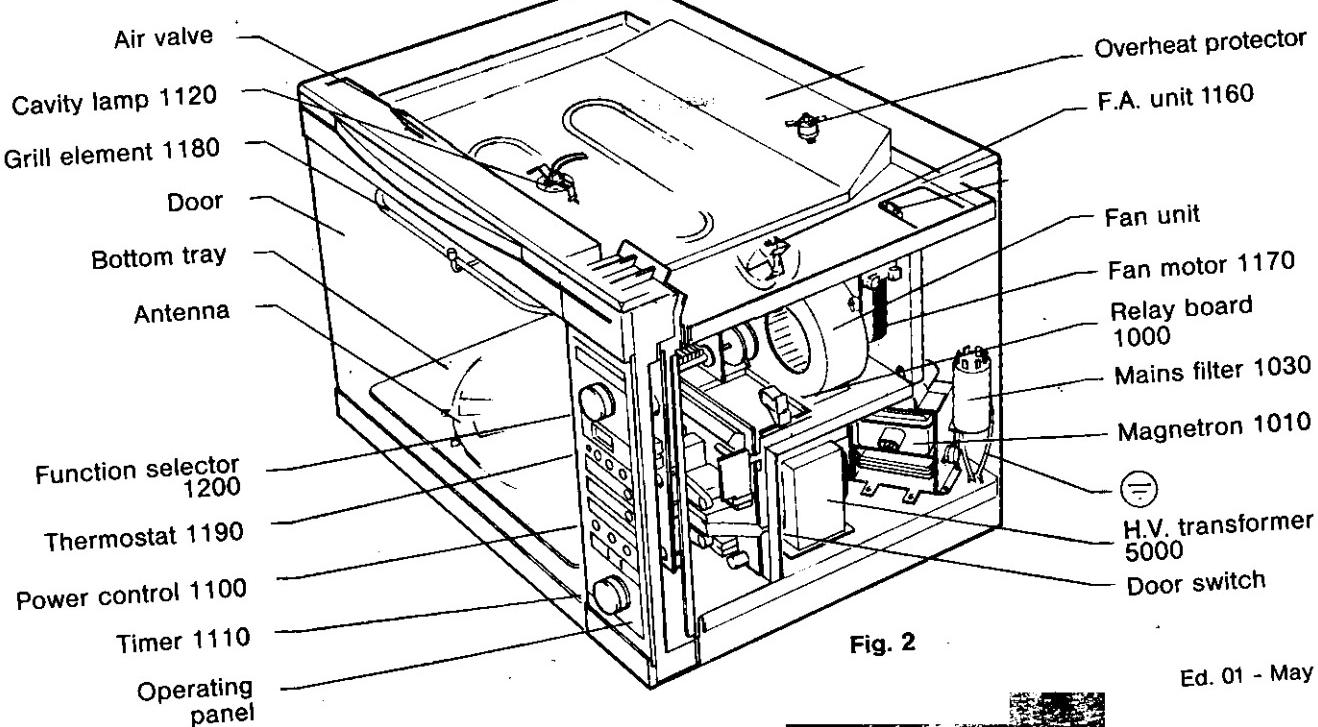


Fig. 2

## OPERATING INSTRUCTIONS

### 1. General

The AVM 930 has three heating sources:

- Microwave
- Forced air
- Grill

Microwave operation can be chosen in combination with one of the above sources.

### 2. Microwave only operation

- Put the function selector in off position
- Set the desired microwave power
- Set the timer to the desired cooking time
- Press the start button

### 3. Forced air cooking

- Set the thermostat to the desired cooking temperature
- Set the function selector to either FA full speed or FA half speed as required
- Set the timer to the desired cooking time or to continuous mode
- Press the start button

### 4. Grill cooking

- Set the thermostat to the desired temperature, for grill this is mostly maximum
- Set the function selector to grill or turbo-grill. Turbo-grill is grill + forced air without heating
- Set the timer to the desired cooking time or continuous mode
- Press the start button.

### 5. Combinations

Microwave cooking can be combined with either Forced air or Grill, but not all combinations at the same time.

### 6. Opening the door

All cooking will be interrupted when the door is opened.

### 7. Jet start

By pressing this button maximum the oven will start and maximum microwave power will be on for 30 secs.

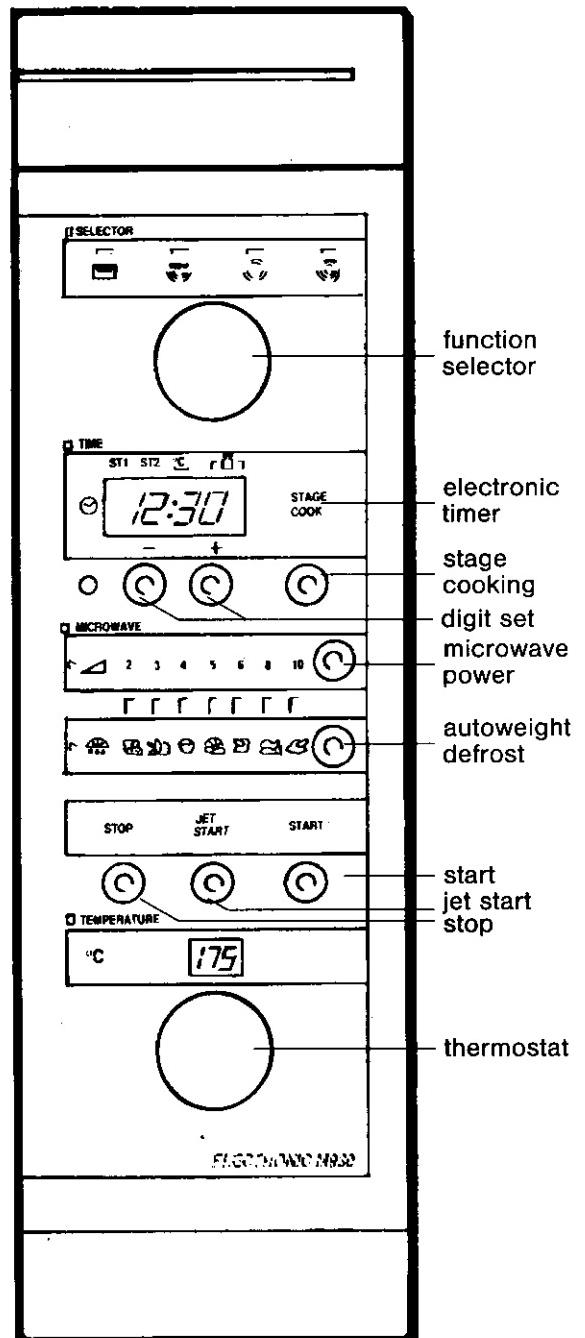
### 8. Stage cooking

A two-stage cooking program can be chosen by:

- 1) Press the stage cooking button.
- 2) Set the desired combination of microwave power and time.
- 3) Press the stage cooking button again.
- 4) Repeat step 2).
- 5) Press the start button.

### 9. Auto weight defrost

By inputting the weight and foodclass automatic defrost will start when pressing this button.



## **DESCRIPTION AND FUNCTION OF COMPONENTS**

### **Interference filter (1030)**

Is intended to avoid interference with radio or TV Set during operation.

### **Cook led (1090)**

This led indicates to the user when the oven is in the cooking cycle. When the cycle is finished the light goes off.

### **Fan motor (1070)**

The fan motor drives a blower fan which draws cooling air through the ventilation opening on the right hand side forcing it around the magnetron and transformer. Same air is also forced into the cavity to make the antenna rotate and to remove steam and vapours given off by the cooking food, and then out through the ventilation openings situated on the left hand side.

### **Cavity lamp (1120)**

The cavity lamp illuminates the interior of the cavity so the food can be seen through the door window. The cavity lamps lights anytime cooking time is set.

### **High voltage transformer (5000)**

Purpose of HV transformer is to provide filament voltage for heating the magnetron filament as well as to produce high voltage used for magnetron tube operation.

During a "cook" cycle, the 220 V (240 V) ac applied to the primary winding is converted into approximately 3.3 V ac on filament winding, and in to approximately 2300 V ac on the high voltage secondary winding of the power transformer.

### **Half wave voltage doubler circuit (2000)**

The half wave voltage doubler circuit consists of a rectifier and a capacitor with bleeding resistor. Purpose of this group is to convert the 2300 V ac coming from the secondary winding of high voltage transformer in to approximately 4000 Volts d.c. needed for magnetron operation.

### **Magnetron tube (1010)**

Magnetron produces microwaves through the interaction of strong electric and magnetic fields. These microwaves are guided into the oven cavity and evenly spread in the cavity by the rotating antenna producing the desired heat in the food.

### **Failure monitor switch (1150)**

This is a normally open switch, which is closed when the door is opened. Should then for any reason the door switches 1055 or 1060 remain closed, the fuse 1002 will blow due to short-circuit. The short-circuit current is limited by resistor 3102.

### **Door switches (1040, 1140)**

These switches are safety switches operated by the door. The switch 1040 interrupts the current to the electronic control and display panel.

Switch 1040 is the primary door switch and 1140 the secondary door switch.

### **Note:**

*Defective switches should be destroyed to prevent possible future use.*

**INSTRUCTIONS FOR DISMANTLING AND REPLACEMENT****Warning high voltage**

Before removing the outer case unplug the oven.  
High voltage parts are accessible when the outer case is removed.

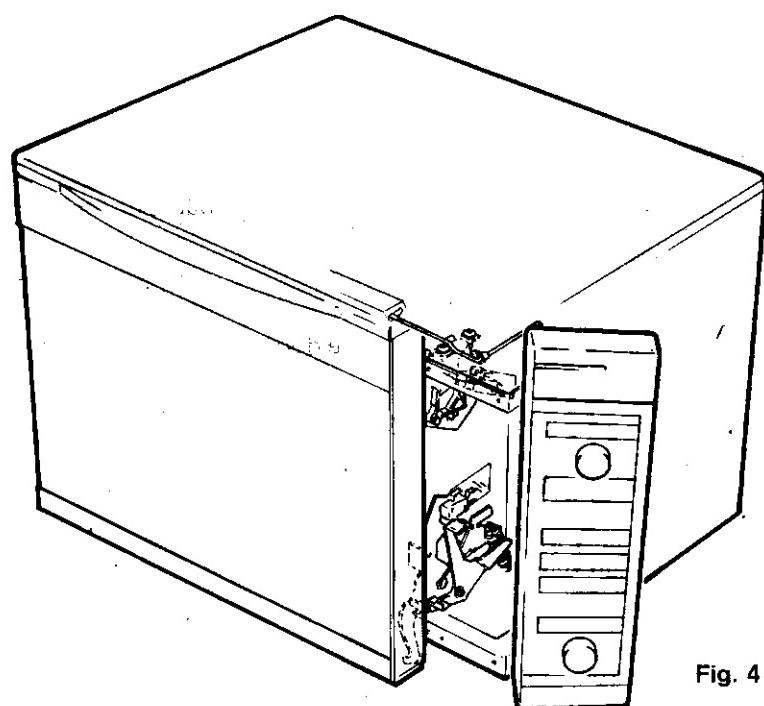
**FRONT PANEL REMOVAL**

Fig. 4

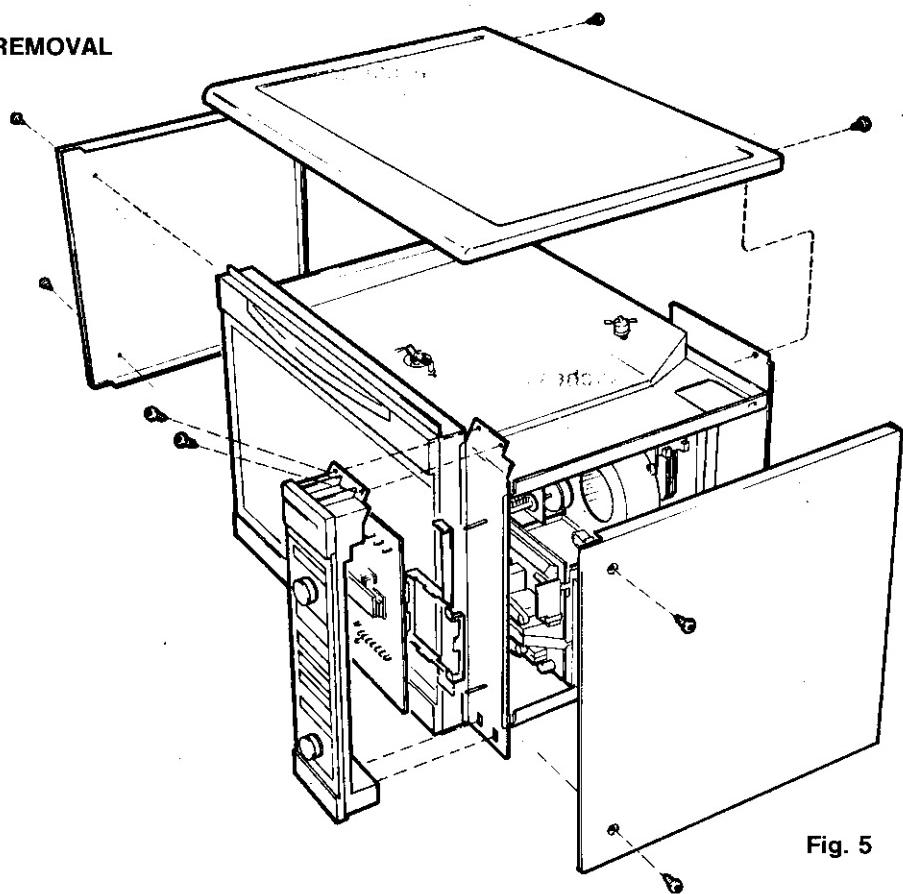
**TOP COVER AND SIDE PLATE REMOVAL**

Fig. 5

CHANGING CAVITY LAMP

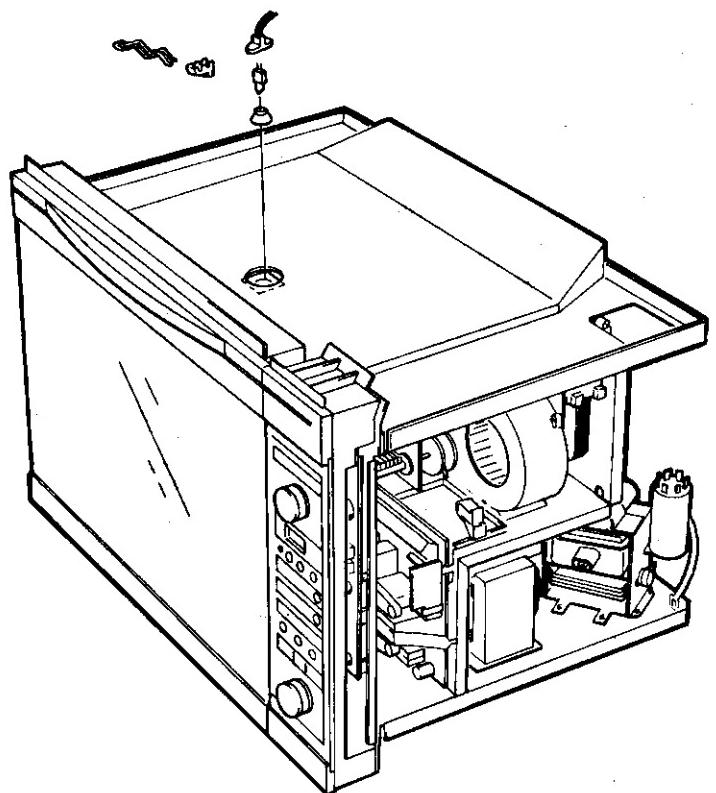


Fig. 6

CHANGING THE GRILL ELEMENT

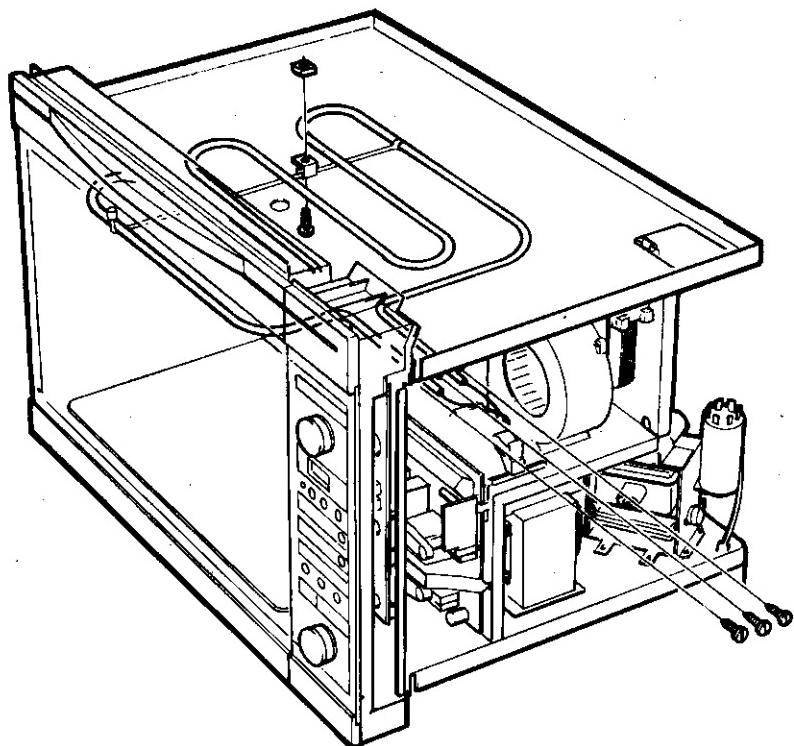


Fig. 7

FAN UNIT REMOVAL

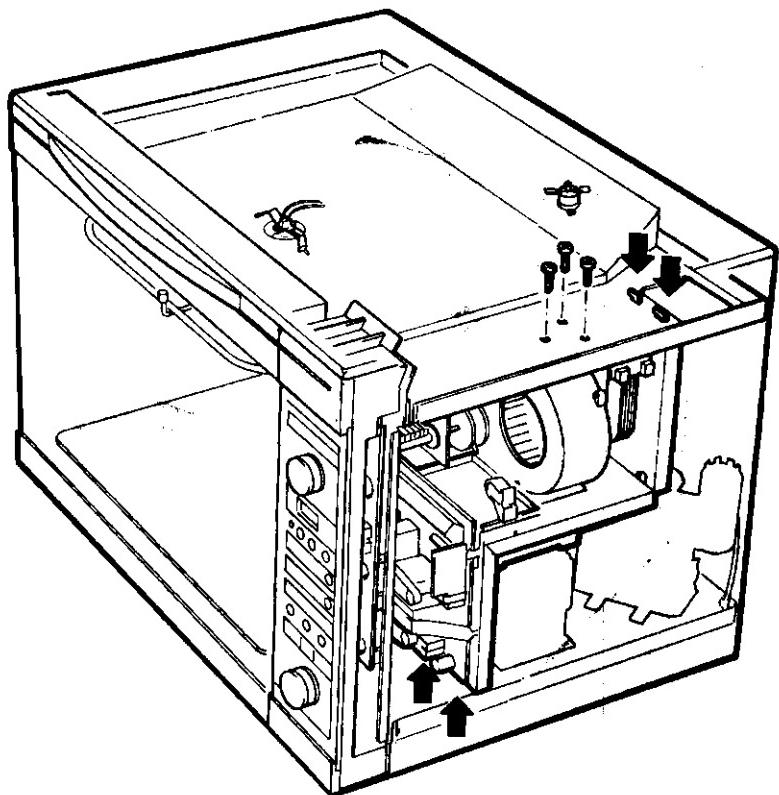


Fig. 8

FORCED AIR UNIT REMOVAL

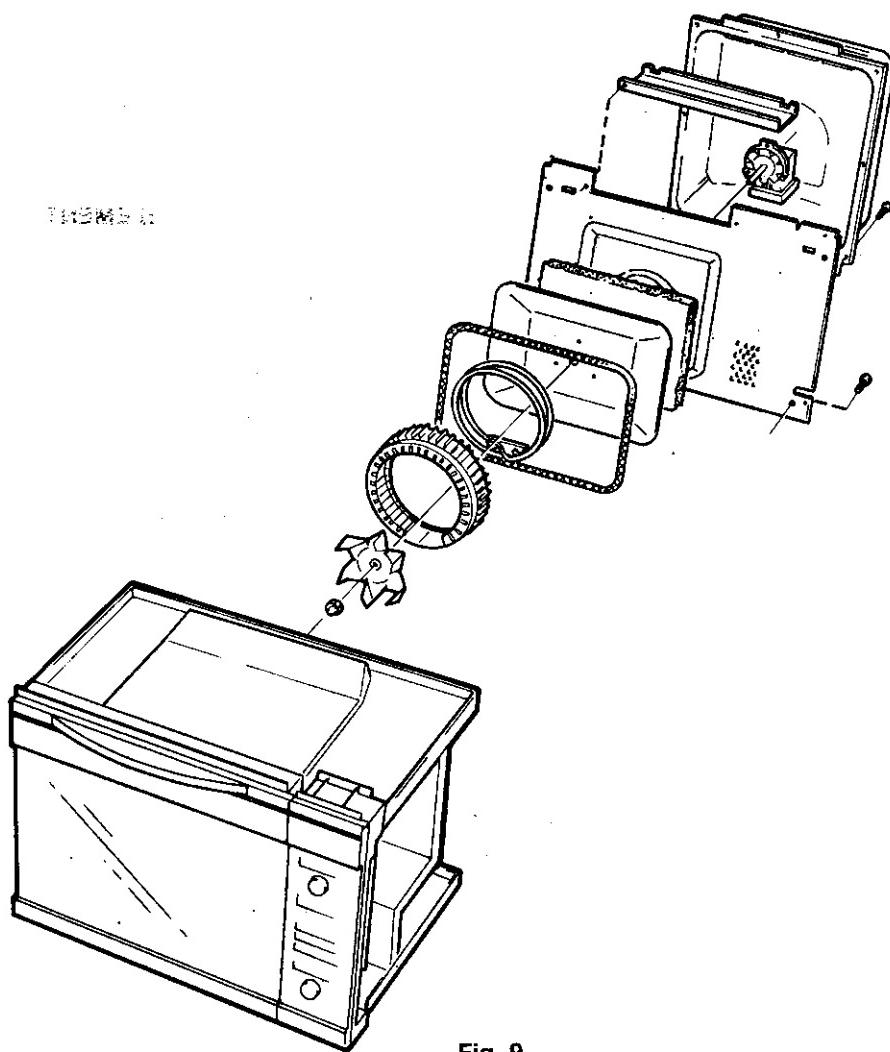


Fig. 9

## CHANGING THE ANTENNA

1. Cut through the silicon glue with a model knife
2. Gently use a screwdriver or something similar to remove the bottom tray
3. Replace the antenna
4. Put the bottom tray back
5. Seal the bottom tray by means of silicon glue 4819 690 48045
6. Allow 24 hrs. for the glue to cure

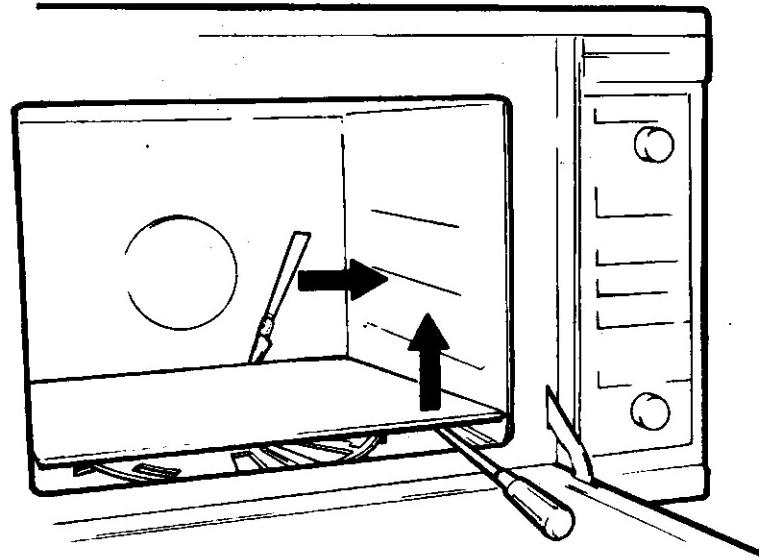
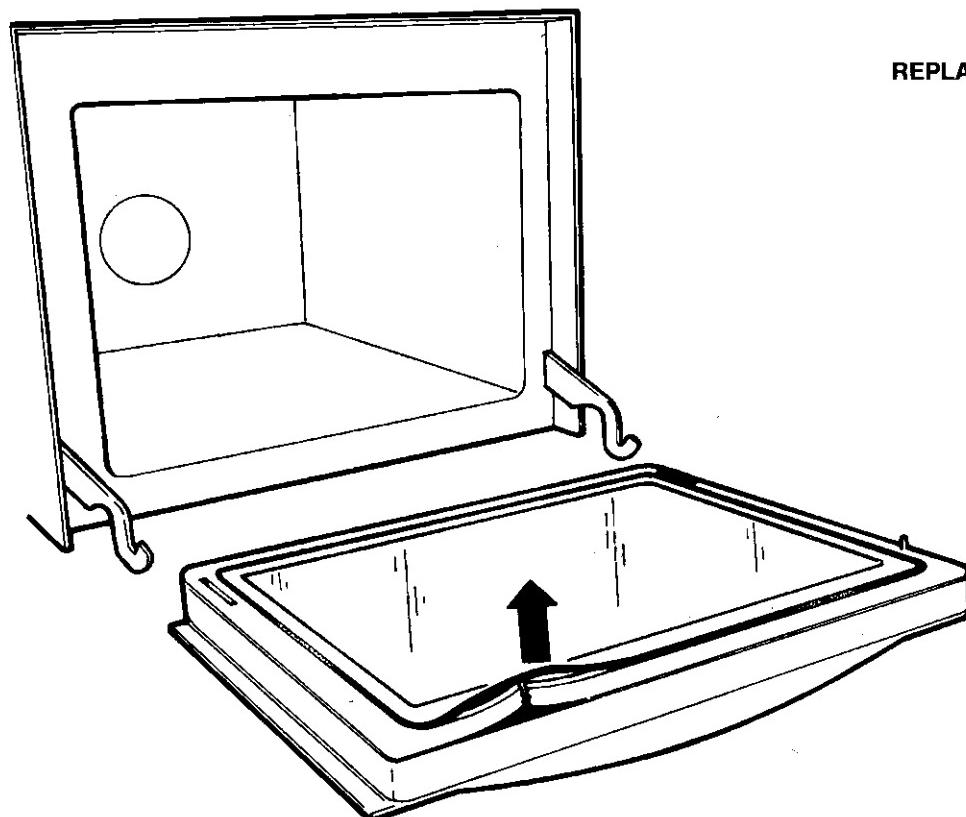


Fig. 10

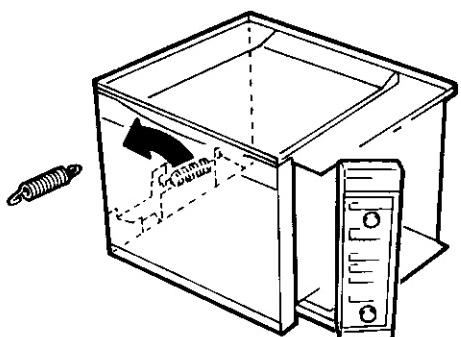


REPLACING THE DOOR INNER FRAME

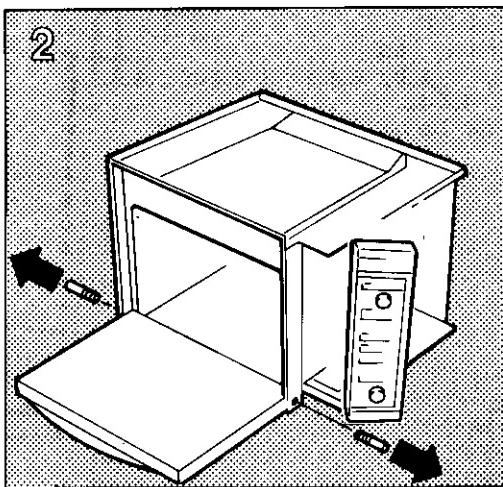
Fig. 11

## DOOR REPLACEMENT

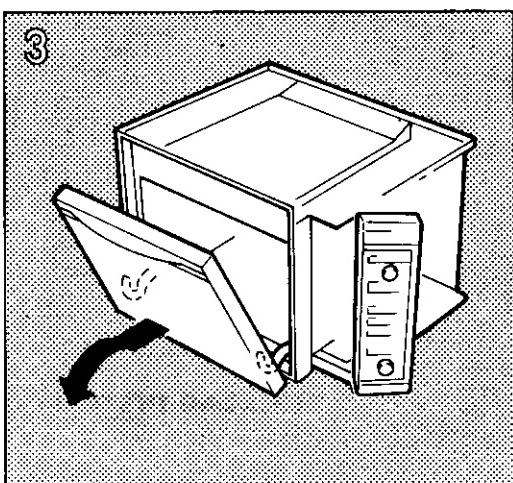
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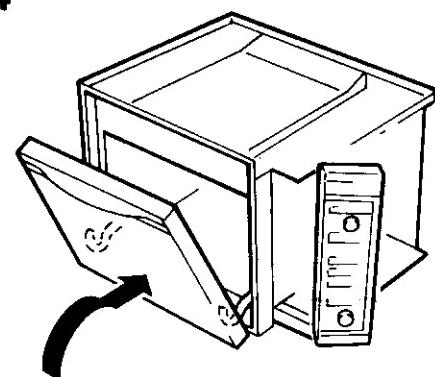
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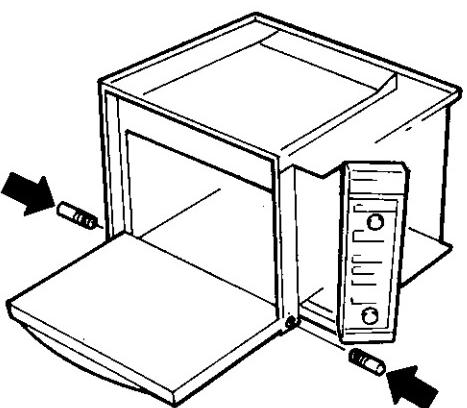
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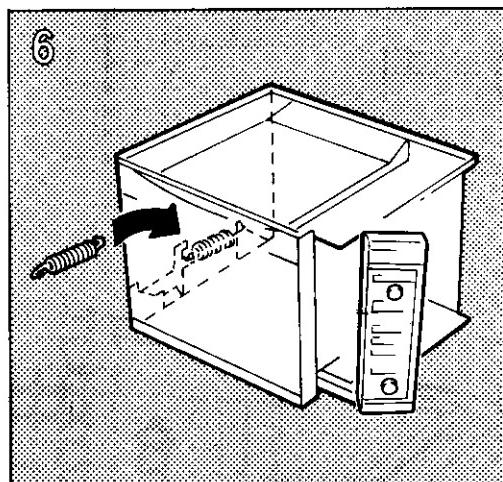
4



5



6



## MEASUREMENTS AND ADJUSTMENTS

### Filament voltage check

**Caution:** Approximately 2300 V ac are present at the high voltage terminals of the transformer during a cook cycle. During test operation keep meter, hands etc., well away from high voltage terminals.

- Disconnect the oven and discharge the capacitor with an insulated screwdriver.
- Remove wires connecting the capacitor to the high voltage terminal on the transformer.
- With alligator clips, connect the voltmeter across the magnetron filament terminals and stand well away from the meter and its leads.
- Apply power and put the oven into cook cycle, the meter should indicate approximately 3.3 V ac.

**Caution:** Switch off the oven before disconnecting the meter.

- If no voltage is indicated by the meter, set the meter on the proper range and check if 220 V (240 V) ac are present at the primary winding of transformer during the "cook" cycle.  
If the input voltage is normal but no filament voltage is present replace HV transformer.

### Anode voltage

Due to the presence of the high voltage (approx. 4 KV) it is not for safety reasons allowed nor necessary to measure anode voltage, normally a continuity test of transformer windings and a capacitor check as described in components checks section are sufficient to determinate if anode voltage is correct or not.

### Measuring the output power

The temperature of one litre of water will rise 14,3°C per minute, if the output power of the oven is 1 kW.

For measuring the output power, proceed as follows:

- Check that the oven and the bottom tray are clean.
- Place one thin walled glass beaker with a diameter of approx. 10 cm. filled with one litre of water, in the centre of the oven cavity after having measured the temperature of the water.
- Start the oven at max. for one minute, checked by the watch (start measuring time when hum from transformer starts).
- Measure the average temperature increase, i.e. temperature after 1 minute minus temperature at the beginning.
- Divide the results by 14.3, the value gives the power in kW.
- The output power of the oven should be higher than 700 W –20% (= 560 W) for the lifetime of the oven.

Repeat this measurement a few times.

- Note: for the Swedish version the nominal output power is 600 W.
- Note: This test is only meant as an indication and will not be accurate to give an exact output power.

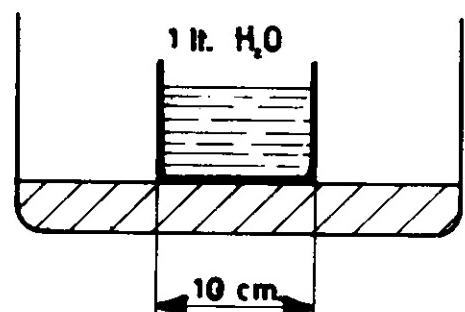


Fig.13

## R.F. LEAKAGE

### Important

An R.F. leakage check should be performed before and after every repair or adjustment.

To perform the R.F. leakage check proceed as follows:

- Fill a glass beaker with 275 milliliters of tap water and place it in the centre of the cavity.
- Adjust the R.F. meter according to operational instructions.
- Start the oven on full power, set the timer to at least 3 minutes.
- Check the oven by moving the probe not faster than five centimeters per second, starting at the right hand top side of the door, clockwise, back to the starting position. Also a check over the entire visual screen must be made. Readings have to be always below  $5 \text{ mW/cm}^2$ .

*Note: For a proper leakage test, position the oven so that is possible to run the probe under and perpendicular to bottom edge of the door.*

### Important

If the reading is over  $5 \text{ mW/cm}^2$  the oven and the door should be checked for damages and the door alignment to the cavity should be checked. Make sure that the door is closing properly.

## COMPONENTS CHECK

### Magnetron check

- Filament test

**Disconnect the oven from the mains.** Discharge the HV capacitor. Disconnect the high voltage wires from the magnetron filament terminals.

Measure the resistance across the two magnetron filament terminals.

Correct reading is less than  $1\ \Omega$ .

If high resistance or infinite resistance is found, replace the magnetron.

- Shorted magnetron test

Connect ohmmeter between magnetron filament terminals and chassis, the reading on the meter should be infinite, if there is low resistance the magnetron is grounded and must be replaced.

*Note: When replacing the magnetron:*

- Do not reverse wires connected to magnetron terminals.
- Do not operate the oven with the R.F. gasket missing or damaged, the R.F. gasket is located around the dome of the magnetron tube to prevent any leakage of energy from it.

**Caution:** When replacing the magnetron care has to be taken to avoid the dome being scratched by any metallic parts. Small particles of any metal in the ceramic dome will greatly reduce the life of the magnetron.

### Capacitor and diode check

#### Capacitor check

An open circuit capacitor will result in no high voltage to the magnetron.

A shorted capacitor normally causes high mains current blowing the line fuse.

An ohmmeter can be used to check for a shorted or open capacitor.

- Unplug the oven. Discharge the capacitor. Remove wires from capacitor
- With an ohmmeter set on the highest scale, measure the resistance across terminals "C" and the other terminal. The meter needle should momentarily deflect upward to indicate continuity and should then return to infinity once the capacitor is charged. Reversing the meter leads should give the same indication.
- If the ohmmeter indicates continuity between the capacitor terminals at all the times, or if no meter deflection occurs at all, the capacitor should be replaced.

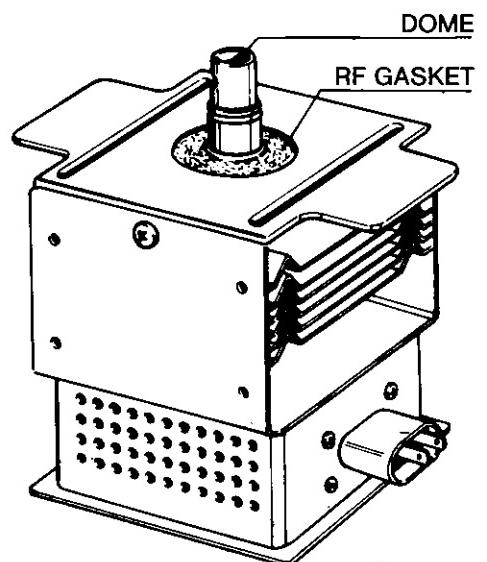


Fig. 14

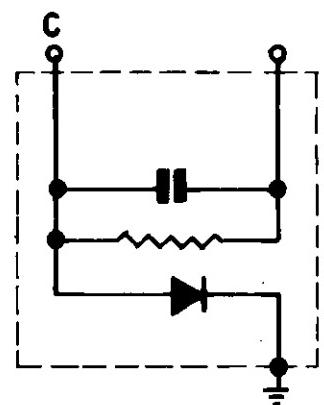


Fig. 15

Diode check

The high voltage diode is built-in in the same case as the HV capacitor.

**Unplug the oven**, discharge the capacitor and remove wires from it.

With an ohmmeter set on the highest scale, measure the resistance across terminal "C" and capacitor case. Reverse the meter leads and again observe the resistance reading. A normal diode should read infinite resistance in one direction and approximately 50 K $\Omega$  or less when the meter leads are reversed.

*Note: Meters operated with less than 6 V battery are not adequate for these checks. The meter should be first checked with a diode known to be good before judging a diode to be defective.*

Safety switches check

**Disconnect the oven**, remove wire from terminal 1 of the switch, connect an ohmmeter to the terminals 1 and 4. With **closed door** reading should be short circuit, with **open door** reading must be **infinite**. If reading is short circuit or infinite all the time, the switch must be replaced.

*Note: If a safety switch is replaced make sure it is activated when the door is closed.*

Failure monitor switch check

**Disconnect the oven**, remove one wire from the switch, connect an ohmmeter to the terminals of the switch. With **open door** reading has to be short circuit, with **closed door** reading has to be **infinite**. If reading is short circuit or infinite all the time switch must be replaced.

*Note: When replacing the failure monitor switch make sure the switch is activated when the door is open.*

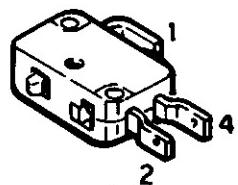
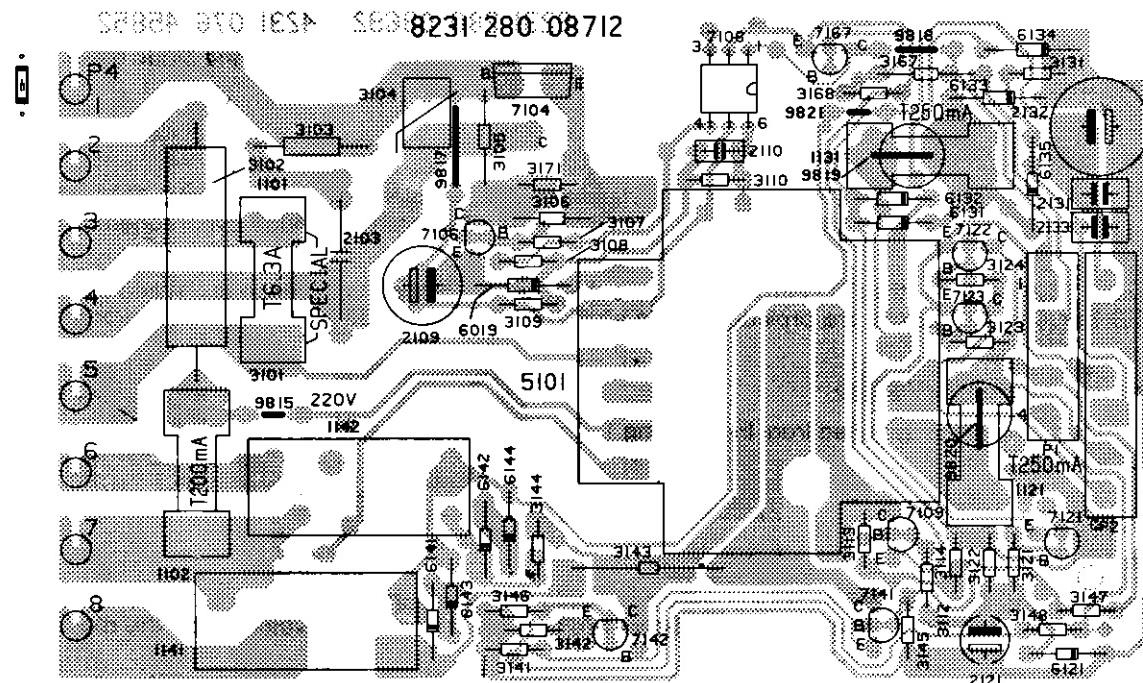


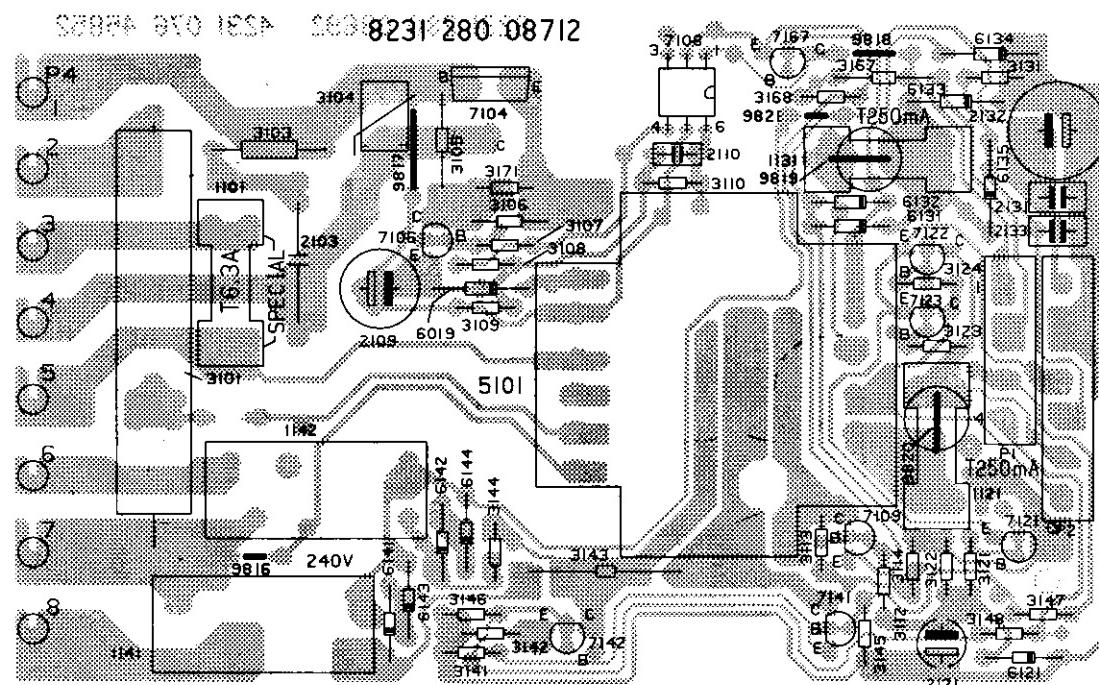
Fig. 16

## **POWER BOARD**

## **STANDARD VERSION**



UK VERSION



## 1. CIRCUIT DESCRIPTION

### 2.1. Supply voltages

#### 2.1.1. Supply Voltage for the Electronic Circuitry

The winding between terminals 14 and 15 of the transformer provide a nominal voltage of 35.2 VAC. This voltage is rectified in the bridge consisting of the diodes 6131 - 6134 and smoothed by the capacitor 2132.

The 50 Hz reference for real time clock and triac sync. is also taken from this winding via the diode 6135. The signal is filtered by resistor 3131 and the capacitor 2133.

#### 2.1.2 Filament Supply Voltage

The winding between terminals 12 and 13 provide the filament with a nominal voltage of 2.5 VAC. This voltage is clamped to U2 through the transistors 7122 and 7123. The transistors are alternately saturated synchronously with the AC-voltage, and are supplied with base current via the FTD.

The transistor 7121 supplies the FTD with a stabilized voltage of ca -29 V with reference to U1, and 7109 does the same for the LED bar. The transistors are provided with a stabilized voltage of -30 V from the zenerdiode 6121.

#### 2.1.3 Opto Isolator Supply Voltage

The optocoupler circuitry is supplied from the winding 1 - 2 of the transformer. The voltage is half-wave rectified in 6019 and smoothed by 2109.

### 2.2 Relay-drivers

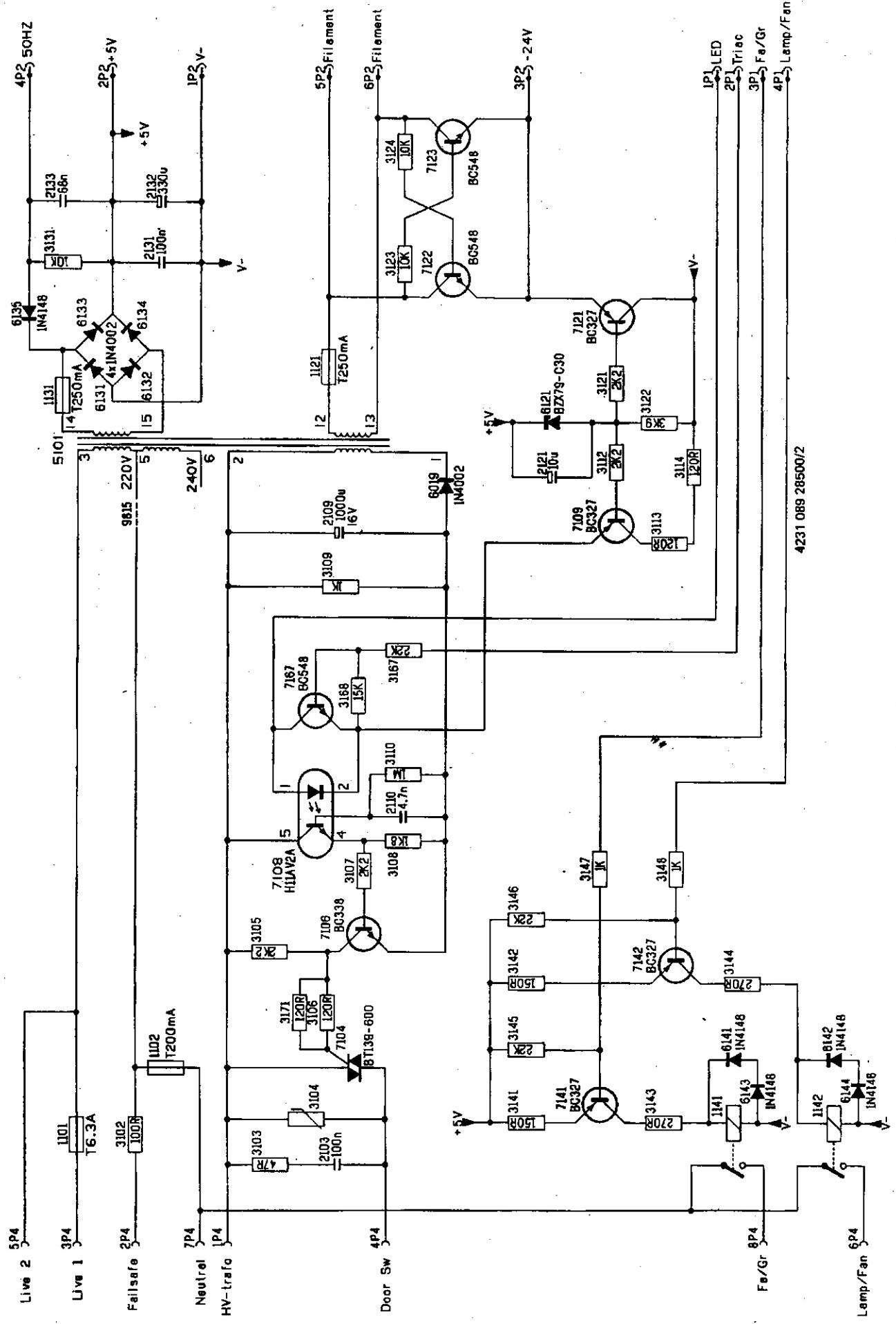
The relays 1141 and 1142 are driven with constant currents from the current generators 7141 and 7142. The current through each relay is approx. 24 mA. The transistors are protected from surge voltages by the diodes 6141 - 6144.

### 2.3 Opto Isolator and Triac Circuitry

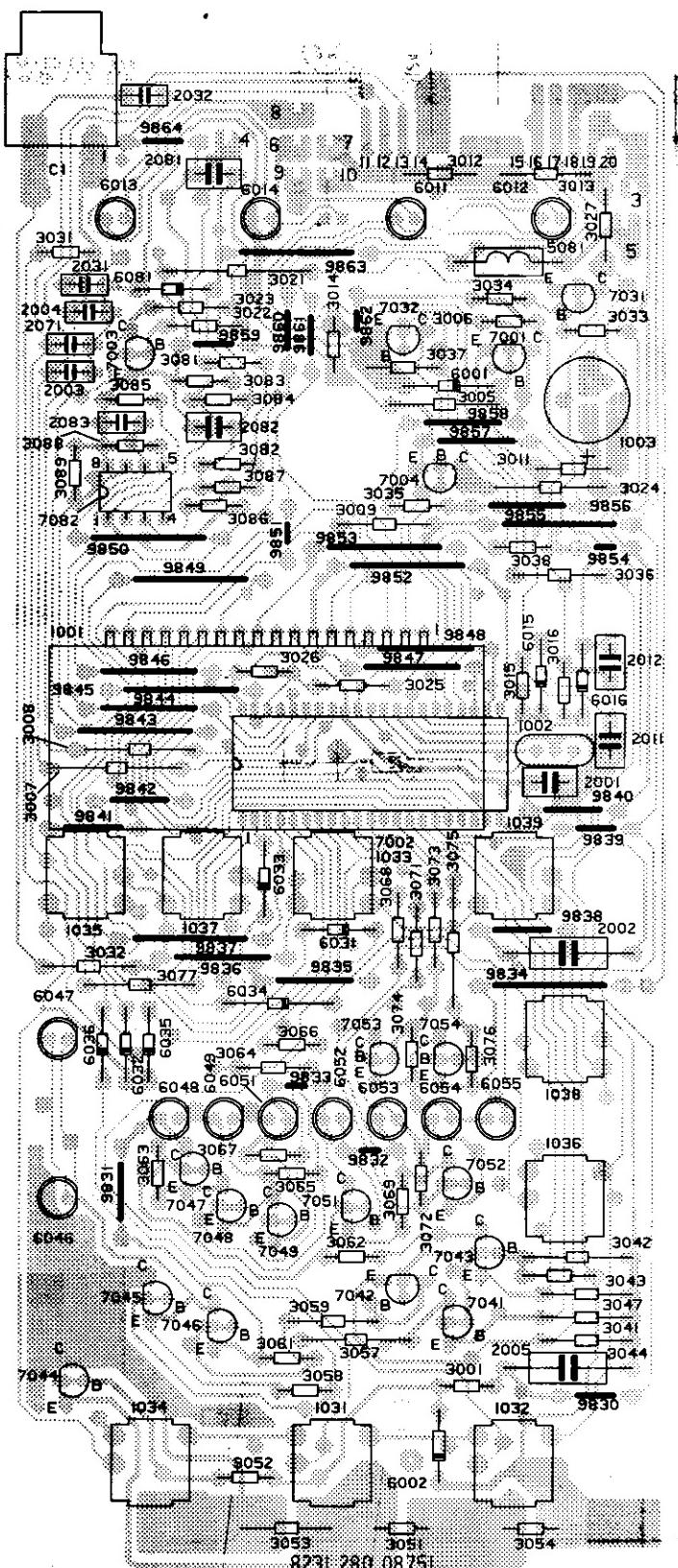
Turning on of the triac is synchronized by the microcomputer. The optocoupler is connected in series with the LED bar on the control board assembly, where a current generator drives a constant current through the LED-array.

The current through 7108 is normally shunted by the transistor 7167, in which case the optocoupler is turned off. When 7167 is turned off, the current passes through the optocoupler-LED, and current passes through the transistor in the optocoupler. This in turn saturates the transistor 7106, and the triac is turned on.

The triac is protected from surge voltages by the VDR-resistor 3104 and the resistor/capacitor circuit 2103/3103.



## **CONTROL BOARD**



## 1. Circuit description

The circuit diagram can be divided into the following main parts:

- Microprocessor
- Voltage regulator and reset
- LED driving circuit
- Display
- Key detection circuit
- Buzzer drive circuit
- Function drive with LEDs
- Temperature probe interface

## 2. Microprocessor

The microprocessor controls the complete operation of the oven.

## 3. Voltage regulator and reset

The voltage regulator and reset circuit consists of the zenerdiode 6001 and the transistor 7001 and the resistors 3005 and 3006. If the voltage across the circuit is lower than the zener voltage, the transistor 7001 is off and holds the reset input of the microprocessor 7002 low.

When the voltage rises above the zener voltage plus U<sub>be</sub> of 7001, the reset input of 7002 goes high and the voltage between U<sub>1</sub> and U<sub>0</sub> is stabilized to approx. 5 V. The regulator circuit is supplied with current partly via the resistor 3001 and the zener diode 6002, and partly via the current generator 7044 and the array of LEDs 6046-6049, 6051-6055.

The zenerdiode 6002 provides the current generator 7044 with a constant voltage of -5 V with reference to U<sub>0</sub>. The transistor 7044 generates a constant current of approximately 13 mA through the LED array. Each LED is shunted by a transistor. The transistors 7045-7047 are driven via the extra driver stages 7041-7043 since the outputs R70-R72 are of the type sink open drain, while the outputs P51-P53, P60-P63 are of the type source open drain. The outputs P51-P53, P60-P63 are provided with internal pull down resistors of typically 80 kΩ.

Due to the base currents into the shunt transistors the current through the LED 6055 will be approximately 19 mA when this LED is lit in the AWD-mode.

## 4. Display

The display is of the FTD type (Fluorescent Tube Display). The display segments and grids are driven directly from the microprocessor outputs P10-P13, P20-P23 (segments) and P40-P43, P50 (grids). These outputs can drive a high voltage and are provided with internal pull down resistors. The filament of the display also forms the cathode, and the filament voltage is clamped to U<sub>2</sub> on the power supply assembly. The display is driven in multiplexed mode, and the grid outputs also provide the scan signals for the key-scanning.

## 5. Key detection circuit

The keys form a matrix consisting of five row inputs, provided by the display grid signals, and two column outputs, which are detected by the transistors 7031 and 7032. The key switches are isolated from the display segments by diodes in order to prevent the switches from affecting the display. The door switch is also a part of the switch matrix.

If one of the switches 1031, 1032, 1034, 1036 or 1038 is closed there should be negative going pulses on the input K00 of the processor. If one of the switches 1033, 1035, 1037, 1039 or the door switch is closed, pulses can be observed on the input K01.

## 6. Buzzer drive circuit

The buzzer is driven by transistor 7004. The signal is taken from port R91 of the processor, and this output must be high when the buzzer is off in order to prevent excessive power dissipation in the resistors 3024 and 3027.

## 7. Function selector with LEDs

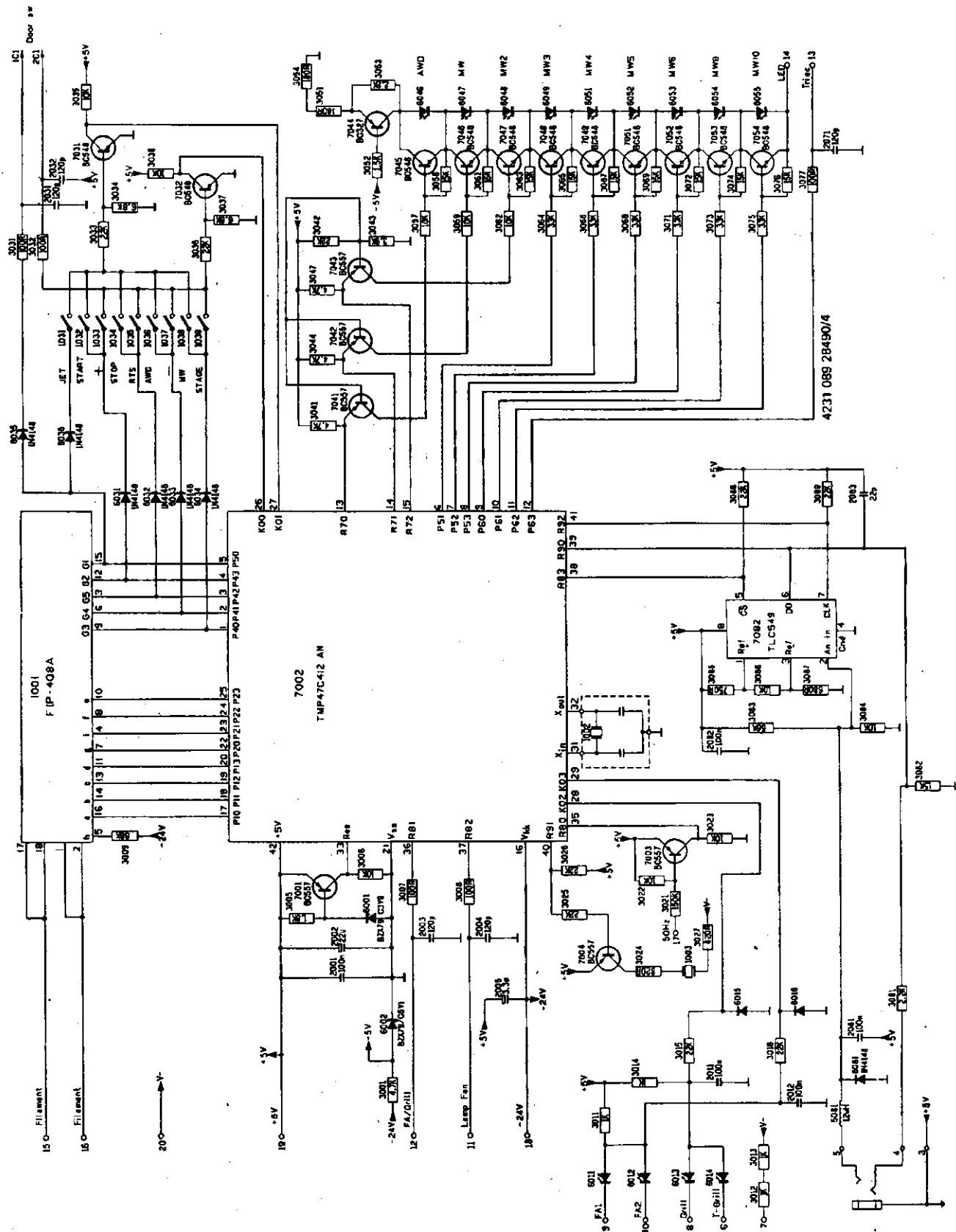
The position of the function selector switch is indicated by the LEDs 6011-6014. The switch position is detected by the inputs K02 and K03 of the microprocessor. The microprocessor can only distinguish between grill positions and FA positions.

## 8. Temperature probe interface

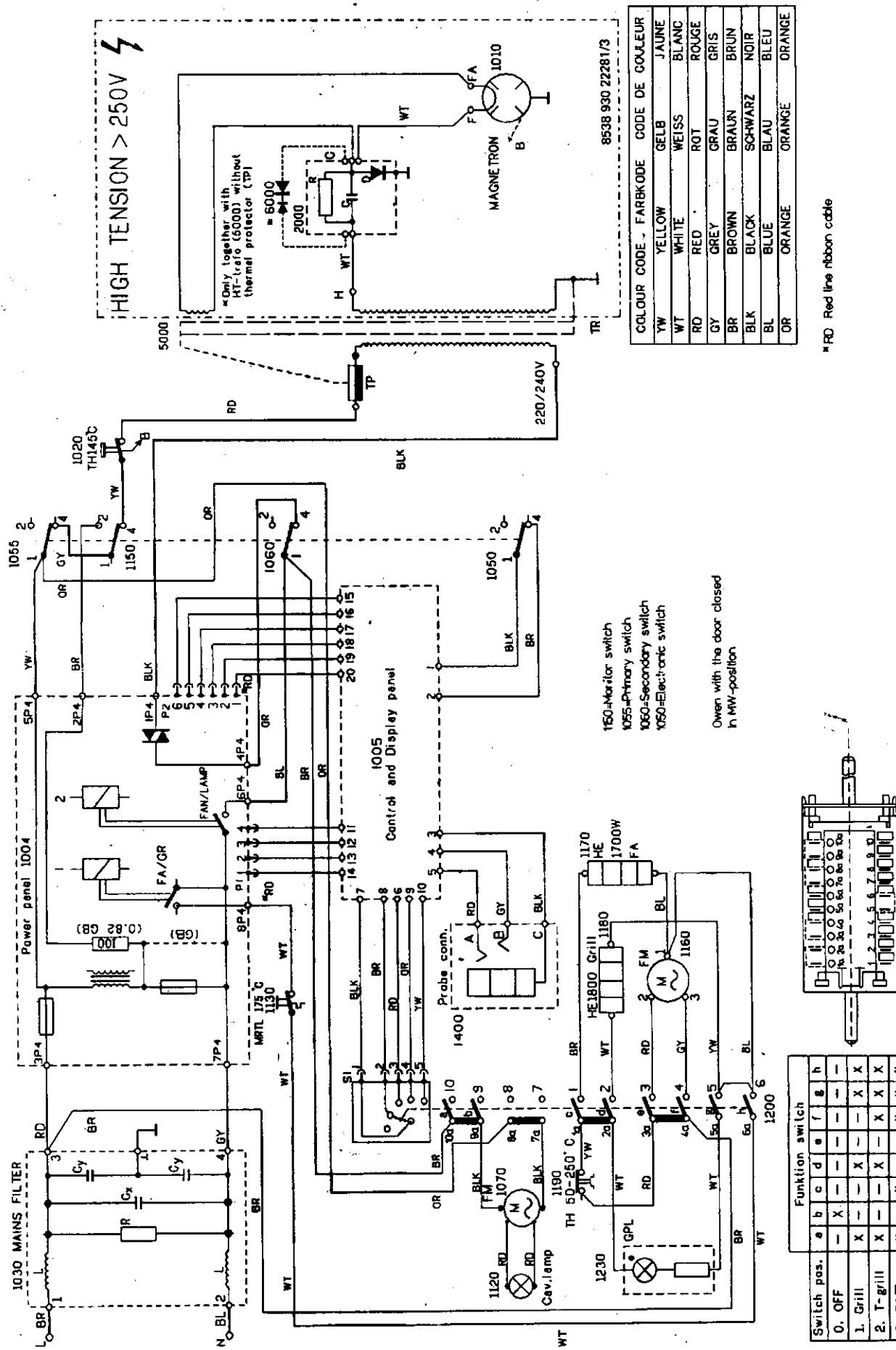
The resistors 3083 and 3084 compensates for the non-linearity of the temperature probe. For the temperature range 35 - 95 degrees centigrade the voltage at pin 2 of 7082 is linear within  $\pm 1$  degree. The voltage divider 3065 - 3067 provides a high and a low reference voltage for the A/D-converter. The resolution of the A/D-converter is two units per degree centigrade.

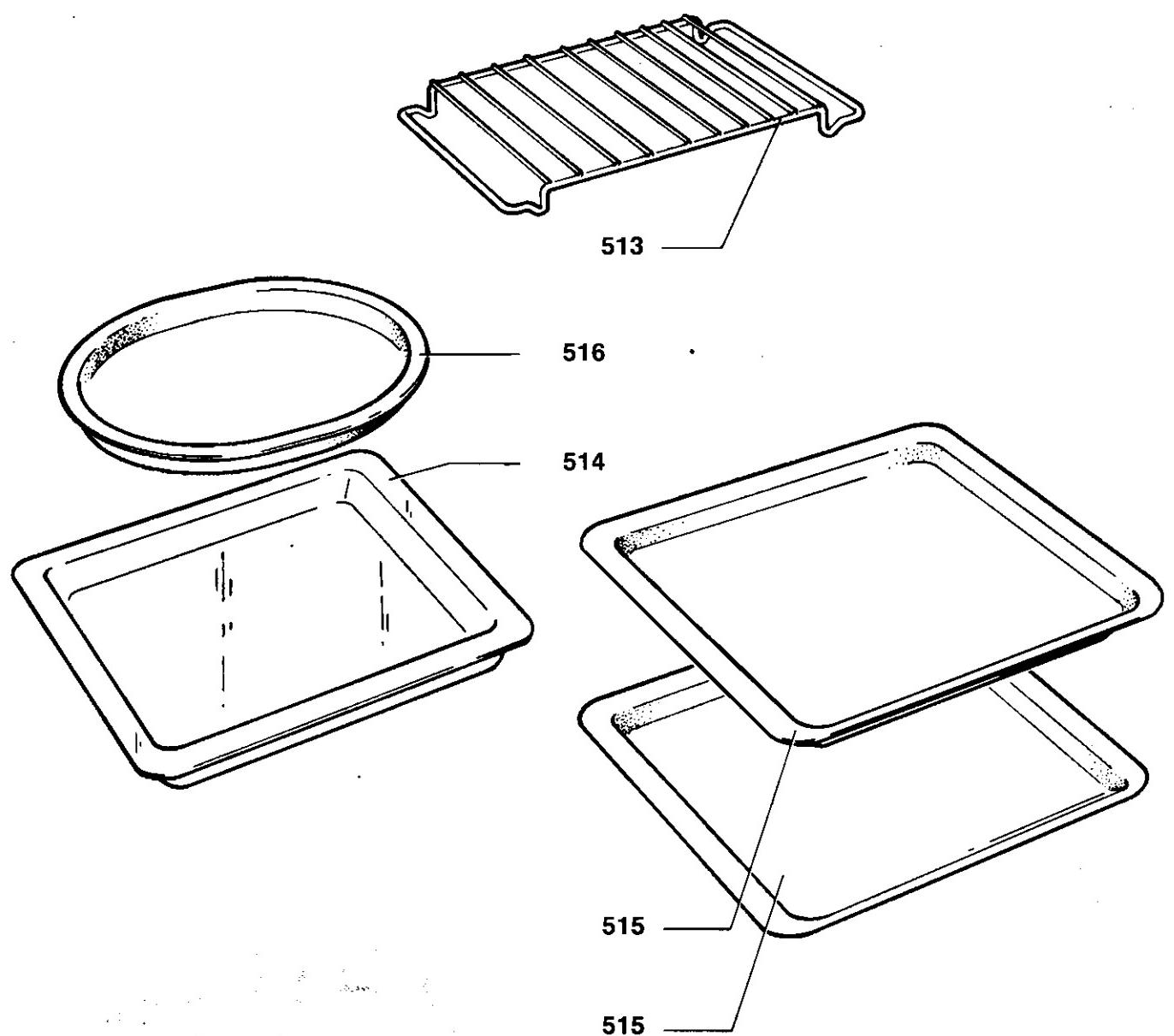
Data is transferred in series from the A/D-converter to the microprocessor. The A/D-converter is selected from port R83 which is connected to the /CS input. The dataflow is controlled by the clock signal from port R92, and data are received on port R92. Normally the output DO on pin 6 on the A/D-converter is in tri-state, so the input R92 on the microprocessor will be held low by 3082.

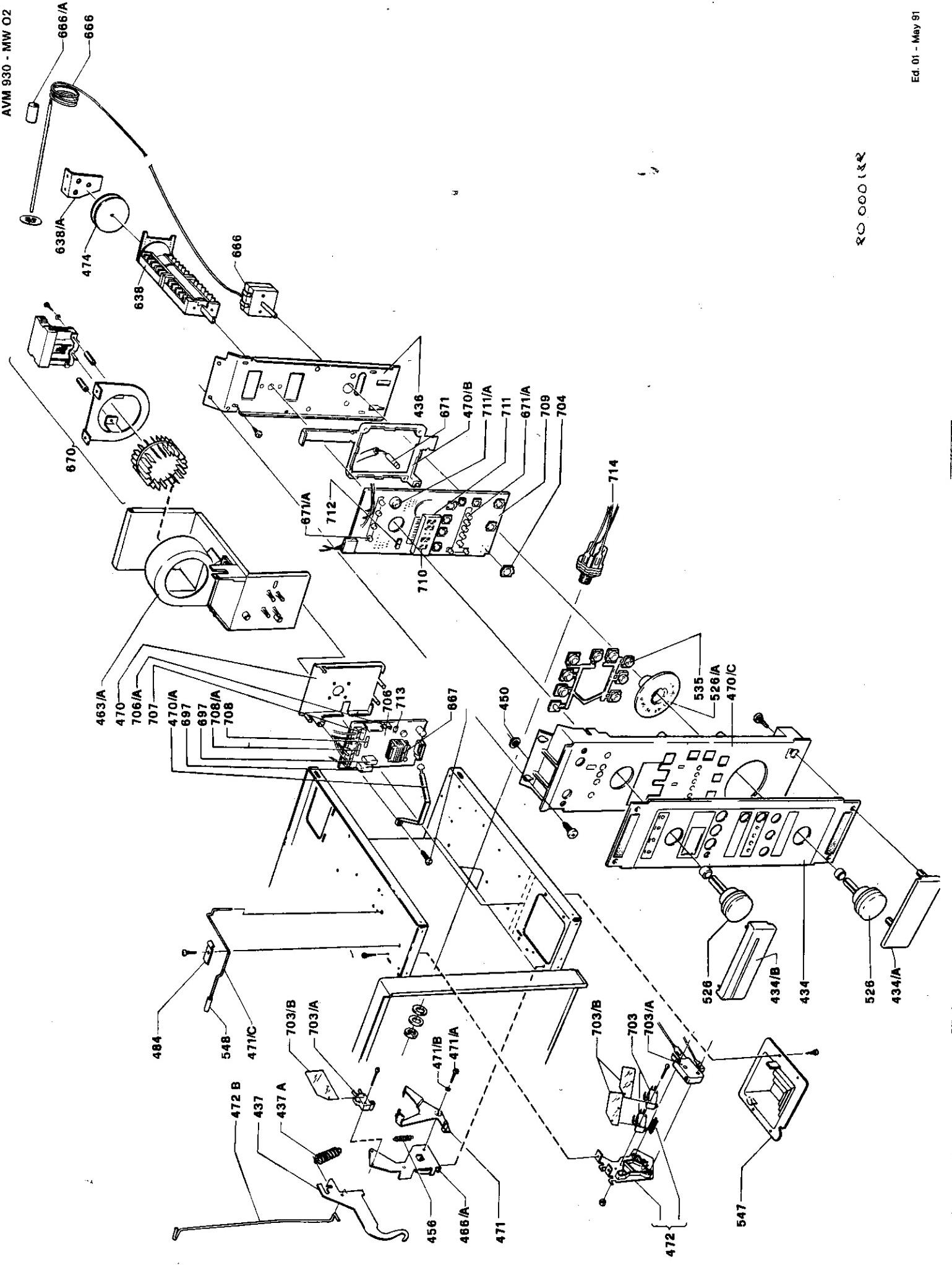
If a temperature probe is connected, 3081 will cause this input to go to U<sub>1</sub>. In this way the processor can detect the presence of a temperature probe. If a temperature probe is connected, but the measured resistance corresponds to a temperature below -10 degrees centigrade, it will be assumed that the probe is broken. The oven will go to temperature mode, but will then immediately go back to stand by.



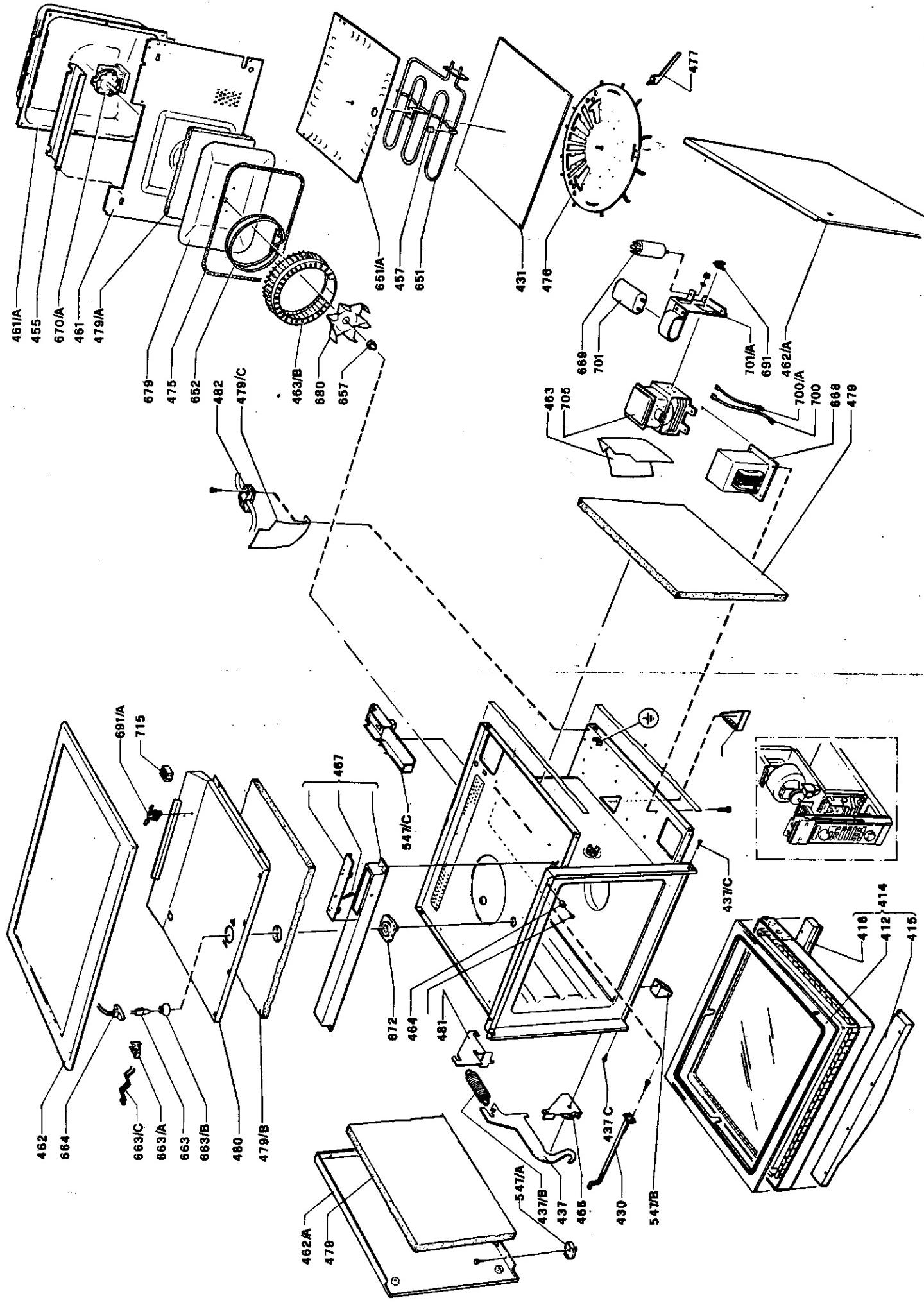
## WIRING DIAGRAM







R0 000 1 &amp; 2



## SPARE PARTS LIST

| Item  | Service Code   | Description                   | Item  | Service Code   | Description                                |
|-------|----------------|-------------------------------|-------|----------------|--|
|       | 4819 310 38672 | Temperature probe             | 479/A | 4819 325 18011 | Back insulation                            |
|       | 4819 321 18129 | Mains cable (general version) | 479/B | 4819 325 18012 | Top insulation                             |
|       | 4819 321 18131 | Mains cable (UK version)      | 479/C | 4819 466 88841 | Protection                                 |
|       | 4819 466 69758 | Sealing for F.A.-motor        | 480   | 4819 440 58901 | Top insulation plate                       |
|       | 4819 690 48045 | Tube with silicon glue        | 481   | 4819 404 78054 | Spring holder                              |
|       | 4819 532 68489 | Washer for F.A.-motor         | 482   | 4819 401 18492 | Mains cable clamp                          |
| 412   | 4819 459 48456 | Inner frame door assy         | 484   | 4819 401 18495 | Clamp for lifting arm                      |
| 414   | 4819 440 58912 | Door assy AV                  | 513   | 4819 458 58348 | Grill grid                                 |
| 414   | 4819 440 58915 | Door assy WH                  | 514   | 4819 440 58905 | Dripping pan                               |
| 415   | 4819 498 69502 | Door handle AV                | 515   | 4819 440 58906 | Backing plate, 2 pcs                       |
| 415   | 4819 498 69503 | Door handle WH                | 516   | 4819 462 79303 | Cover for dripping pan                     |
| 416   | 4819 462 79307 | Decor strip door AV           | 526   | 4819 412 58214 | Temp./Function knob AV (2 pcs.)            |
| 416   | 4819 462 79299 | Decor strip door WH           | 526   | 4819 412 58212 | Temp./Function knob WH (2 pcs.)            |
| 430   | 4819 404 78052 | Holder for capillary tube     | 526/A | 4819 453 48976 | Temperature scale                          |
| 431   | 4819 466 78163 | Ceramic bottom shelf          | 535   | 4819 412 58213 | Knob AV                                    |
| 434   | 4819 453 49014 | Operating panel AV            | 535   | 4819 412 58211 | Knob WH                                    |
| 434   | 4819 453 48975 | Operating panel WH            | 547   | 4819 462 79296 | Air inlet foot black                       |
| 434/A | 4819 453 48986 | Decor strip AV lower          | 547/A | 4819 466 98539 | Distance for side cover AV                 |
| 434/A | 4819 462 79301 | Decor strip WH lower          | 547/A | 4819 466 98538 | Distance for side cover WH                 |
| 434/B | 4819 462 79309 | Decor strip AV upper          | 547/B | 4819 462 79297 | Foot black                                 |
| 434/B | 4819 462 79312 | Decor strip WH upper          | 547/C | 4819 418 78446 | Air channel foot                           |
| 436   | 4819 440 59013 | Panel background              | 548   | 4819 462 48233 | Sliding cage for air valve                 |
| 437   | 4819 404 78053 | Balance arm, 2 pcs            | 638   | 4819 271 38116 | Function selector                          |
| 437/A | 4819 492 68508 | Spring for balance arm right  | 638/A | 4819 404 78056 | Support for function selector              |
| 437/B | 4819 492 68509 | Spring for balance arm left   | 651   | 4819 259 28633 | Grill element 220 V                        |
| 437/C | 4819 535 98354 | Hinge shaft, 2 pcs            | 651   | 4819 259 28637 | Grill element 230 V (Swedish version only) |
| 450   | 4819 505 18238 | Self tapping nut, 4 pcs       | 651   | 4819 259 28635 | Grill element 240 V (UK version only)      |
| 455   | 4819 466 88839 | Drip protection               | 651/A | 4819 466 78164 | Catalytic plate (optional)                 |
| 456   | 4819 492 68504 | Spring for rocker arm, 2 pcs  | 652   | 4819 259 28634 | F.A.-element 230 V                         |
| 457   | 4819 466 98533 | Distance for grill, 2 pcs     | 652   | 4819 259 28636 | F.A.-element 240 V (UK version only)       |
| 461   | 4819 440 58899 | Back cover                    | 657   | 4819 505 18248 | Left-threaded nut F.A.-motor               |
| 461/A | 4819 462 48231 | Cap for back cover            | 663   | 4819 134 88142 | Halogen lamp 6V 10W                        |
| 462   | 4819 440 58914 | Top cover plate AV            | 663/A | 4819 255 18165 | Adapter for lamp holder                    |
| 462   | 4819 440 58904 | Top cover plate WH            | 663/B | 4819 380 28007 | Lamp reflector                             |
| 462/A | 4819 440 58913 | Side cover plate AV           | 663/C | 4819 492 68507 | Lamp spring                                |
| 462/A | 4819 440 58903 | Side cover plate WH           | 664   | 4819 255 18166 | Lamp socket                                |
| 463   | 4819 440 58897 | Air guide for magnetron       | 666   | 4819 271 28652 | Capillary thermostat                       |
| 463/A | 4819 440 58898 | Air separating plate          | 666/A | 4819 492 68505 | Stop clip                                  |
| 463/B | 4819 458 58347 | Air guide F.A. (unfolded)     | 667   | 4819 148 68039 | Transformer                                |
| 464   | 4819 404 78055 | Holder for top cover          | 668   | 4819 148 68036 | H.T. transformer 220 V                     |
| 466   | 4819 528 78053 | Steering wheel left           | 668   | 4819 148 68037 | H.T. transformer 240 V (UK version only)   |
| 466/A | 4819 528 78054 | Steering wheel right          | 669   | 4819 121 18162 | Mains filter                               |
| 467   | 4819 360 58462 | Valve assy                    | 670   | 4819 515 28192 | Fan assy                                   |
| 470   | 4819 404 78146 | Holder for PCB                | 670/A | 4819 361 78148 | F.A.-motor                                 |
| 470/A | 4819 404 78147 | Bracket                       | 671   | 4819 134 48257 | Indicator lamp                             |
| 470/B | 4819 466 98566 | Distance for PCB              | 671/A | 4819 130 38055 | Led (13 pcs.)                              |
| 470/C | 4819 466 98565 | Distance plate                | 672   | 4819 381 18151 | Lamp lens                                  |
| 471   | 4819 404 78047 | Rocker arm                    | 679   | 4819 462 79298 | Fan cover F.A.                             |
| 471/A | 4819 502 38188 | Rocker arm screw              | 680   | 4819 515 28193 | Fan wheel F.A.                             |
| 471/B | 4819 532 68488 | Curved spring washer          | 691   | 4819 271 28653 | Thermostat 36TXE21                         |
| 471/C | 4819 492 68559 | Lifting arm for valve         | 691/A | 4819 271 28651 | Thermostat 175°C                           |
| 472   | 4819 528 38351 | Cam assy for switch unit      |       |                |  |
| 472/B | 4819 404 78049 | Latch arm for cam-curve       |       |                |  |
| 474   | 4819 528 38353 | Cam for valve                 |       |                |  |
| 475   | 4819 466 69759 | Hot air gasket                |       |                |  |
| 476   | 4819 303 98021 | Antenna assy                  |       |                |  |
| 477   | 4819 303 98022 | Antenna wing                  |       |                |  |
| 479   | 4819 325 18013 | Side insulation assy, 2 pcs   |       |                |  |

| Item  | Service Code   | Description   | Item  | Service Code   | Description                                 |
|-------|----------------|---|-------|----------------|---|
| 697   | 4819 280 68423 | Relay (2 pcs.)  | 706/A | 4819 130 28011 | Triac                                       |
| 700   | 4819 321 18132 | H.T. cable 1  | 707   | 4819 113 88001 | Resistor 100 $\Omega$ 7 W                   |
| 700/A | 4819 321 18133 | H.T. cable 2  | 707   | 4819 112 48005 | Resistor 0.82 $\Omega$ 15 W<br>(UK version) |
| 701   | 4819 121 48009 | H.T. capacitor 0.9 $\mu$ F<br>(UK and Nordic version<br>only) | 708   | 4819 253 58001 | Fuse T 6.3 A                                |
| 701   | 4819 121 48008 | H.T. capacitor 1.05 $\mu$ F                                   | 708/A | 4819 253 38015 | Fuse T 250 mA                               |
| 701/A | 4819 404 78048 | Capacitor holder  | 708/B | 4819 253 38011 | Fuse T 250 mA (2 pcs.)                      |
| 703   | 4819 271 38049 | Microswitch SAIA, 5 pcs                                       | 709   | 4819 214 78309 | Control board assy                          |
| 703/A | 4819 271 38029 | Microswitch XG2-S20   | 710   | 4819 130 38044 | FTD Display                                 |
| 703/B | 4819 325 28007 | Insulation 0.5 mm, 3 pcs                                      | 711   | 4819 209 88019 | Microprocessor                              |
| 704   | 4819 271 38115 | VKS - switch (9 pcs.)   | 711/A | 4819 280 18019 | Buzzer                                      |
| 705   | 4819 131 58017 | Magnetron 2M 240 H (P)  | 712   | 4819 209 88012 | I.C.  |
| 706   | 4819 214 78308 | Power board (UK version)                                      | 713   | 4819 130 98002 | Opto - coupler                              |
| 706   | 4819 214 78307 | Power board (STD version)                                     | 714   | 4819 264 38007 | Probe jack                                  |
|       |                |   | 715   | 4819 290 68285 | Terminal block                              |